

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-7, 10, 13 and 16 have been amended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 1-18 remain pending in the application.

**Claim Rejections under 35 U.S.C. § 103**

Claims 1-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0039886 (“Doi”) in view of U.S. Patent Publication No. 2001/0019952 (“Ishida”). In response, Applicants traverse the rejection for the reasons set forth below.

Applicants rely on MPEP § 2143.03, which requires that all words in a claim must be considered in judging the patentability of that claim against the prior art. Here, the cited references do not identically disclose, teach or suggest all the claim limitations. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants submit that Doi and Ishida, alone or in combination, do not disclose, teach or suggest each and every element of independent claims 1, 4, 7, 10, 13 and 16. Independent claim 1 is directed to a radio cell station apparatus. Independent claim 4 is directed to a personal station. Independent claim 7 is directed to a method of controlling a reference signal performed by a radio cell station apparatus. Independent claim 10 is directed to a method of controlling a reference signal performed by a personal station. Independent claim 13 is directed to a computer program, embodied in a computer readable medium, for controlling a reference signal performed by a radio cell station. Independent claim 16 is directed to a computer program, embodied in a computer readable medium, for controlling a reference signal performed by a personal station.

For example, in addition to other patentable features, independent claim 1 includes a “reference signal allocation unit for allocating, by switching the reference signals that have been allocated to the personal stations establishing space division multiple access respectively prior to change in the number of multiplexed connections to reference signals capable of maintaining communication quality even after the number of multiplexed connections is changed, the switched reference signals to said plurality of personal stations respectively, when change in the number of multiplexed connections is detected in said multiplexed connection number detection unit.” Similarly, in addition to other patentable features, independent claim 4 includes “a receiving unit for receiving a request for switching a reference signal from said radio cell station apparatus in accordance with change in the number of multiplexed connections of the personal stations establishing space division multiple access and a switching unit for switching the reference signal to a reference signal capable of maintaining communication quality even after the number of multiplexed connections is changed and transmitting a response to the request for switching to said radio cell station apparatus. Independent claims 7, 10, 13 and 16 contain similar patentable limitations.

Accordingly, the claimed invention provides a radio cell station apparatus capable of estimating with high accuracy a synchronous position of a signal for each user regardless of change in the number of users that establish multiple access as well as separating and extracting a signal of a desired user in a stable manner.

In contrast, Doi and Ishida fail to disclose, teach or suggest each and every element of independent claims 1, 4, 7, 10, 13 and 16. Doi is directed to a radio communication system and Ishida is directed to a wireless base station and wireless phone. The Office Action acknowledges that Doi does not disclose “a reference signal allocation unit” as claimed and cites Ishida for further support.

However, Ishida fails to cure the deficiencies of Doi. The Office Action asserts that Ishida discloses allocation channel assignment notification contains the associated UW and notifies that the link channel has been assigned to the mobile station. However, Ishida does not disclose, teach or suggest a “reference signal allocation unit for allocating, by switching

the reference signals that have been allocated to the personal stations establishing space division multiple access respectively prior to change in the number of multiplexed connections to reference signals capable of maintaining communication quality even after the number of multiplexed connections is changed, the switched reference signals to said plurality of personal stations respectively, when change in the number of multiplexed connections is detected in said multiplexed connection number detection unit.”

Figs. 4 and 5 (in particular element 805) of Ishida disclose as the feature allegedly corresponding to the "reference signal allocation unit" in claim 1, a configuration for allocating to a mobile station that has issued a link channel assignment request, a unique word that has not yet been allocated in unique word information held in the unique word storing unit 90. Comparing this disclosed feature with the claimed "reference signal allocation unit," this feature may seem identical in that switching between the reference signals is made before and after a change in the number of multiplexed connections.

That is, Ishida is configured to allocate a unique word that has not yet been allocated to a mobile station that has issued a link channel assignment request. However, Ishida is not configured to allocate a unique word optimized for each multiplexed connection number to all of the plurality of mobile stations including the mobile station that has issued the link channel assignment request, as in the invention of the subject application.

In other words, according to Ishida, the unique words for remaining mobile stations except for the mobile station that has issued the link channel assignment request are fixed to those that were allocated thereto at the time when the link channel assignment request was issued, but a unique word optimized for each multiplexed connection number is not allocated to those remaining mobile stations. Consequently, it seems impossible for the system disclosed in Ishida to avoid deterioration of synchronous position estimation accuracy and interference canceling performance caused by subsequent change in the number of multiplexed connections.

In summary, the subject matter claimed in independent claims 1, 4, 7, 10, 13 and 16 is directed toward solving a different problem than that of Doi and Ishida. As a result, Doi and

Ishida do not mention or address the problem addressed by the subject matter claimed in independent claims 1, 4, 7, 10, 13 and 16. Basically, Ishida provides no teaching or suggestion for the problems to be solved by the invention of the subject application, that is, such problems that, because of variation at every moment of a spatial correlation value of the users depending on increase or decrease in the number of multiplexed connections, synchronous position estimation accuracy and interference canceling performance are deteriorated by subsequent change in the number of multiplexed connections, if the reference signal including the unique word allocated at the time of connection request is used.

Accordingly, Applicants request that the rejection be withdrawn and independent claims 1, 4, 7, 10, 13 and 16 be allowed. Further, dependent claims 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17 and 18 depend from one of independent claims 1, 4, 7, 10, 13, or 16 and should be allowed for the reasons set forth above without regard to further patentable limitations contained therein.

Further, if this rejection of the claims is maintained, the examiner is respectfully requested to point out where the above-mentioned features are disclosed in Doi and Ishida.

**Conclusion**


Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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